

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Number : 10/087,385 Confirmation No.: 3339  
Applicant : Mark L. Beard  
Filed : March 1, 2002  
Title : SYSTEM AND METHOD FOR MEASURING AND UTILIZING  
POOLING ANALYTICS  
TC/Art Unit : 3691  
Examiner: : Jung U. LIU  
  
Docket No. : 72167.000280  
Customer No. : **21967**

**APPEAL BRIEF**

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**APPEAL BRIEF**

Appellants' Appeal Brief in connection with the above-captioned patent application with the requisite fee in accordance with 37 C.F.R. § 1.17(c) are hereby submitted. A Notice of Appeal was filed December 22, 2009 along with a pre-appeal brief conference request. A Notice of Panel Decision from Pre-Appeal Brief Review was received on May 29, 2009 instructing Appellant to proceed to Board of Patent Appeals and Interferences. Each item required by 37 C.F.R. § 41.37 is set forth below. Appellants believe that no additional fees are deemed necessary, however if there are any deficiencies, please charge the undersigned's Deposit Account No. 50-0206.

In response to the Office Action dated July 30, 2008 ("Office Action"), rejecting pending claims 1-16, Appellants respectfully request that the Board of Patent Appeals and Interferences reconsider and withdraw the rejections of record, and allow the pending claims, which are attached hereto as Claims Appendix, Section IX.

**I. Real Party In Interest**

The real party in interest is JPMorgan Chase Bank, N.A. as assignee of the entire interest in the above-referenced application.

**II. Related Appeals And Interferences**

There are no known related appeals or interferences.

**III. Status Of Claims**

Claims 1, 4-9, and 12-16 are currently rejected under 35 U.S.C. § 103(a) as being unpatentable over Quail Creek Bank Rates Page (hereinafter “Quail Creek”) in view of Official Notice; hereinafter “Official Notice”).

Claims 2-3 and 10-11 are currently rejected under 35 U.S.C. § 103(a) as being unpatentable over Quail Creek in view of Official Notice and further in view of U.S. Patent No. 5,799,288 to Tanaka *et al.* (hereinafter “Tanaka”).

The rejection of claims 1-16 is appealed.

**IV. Status Of Amendments**

No amendments to the claims have been filed after the last rejection.

**V. Summary Of Claimed Subject Matter****A. Summary of the Invention<sup>1</sup>**

The present invention solves the problems of the prior art by recognizing that the prior art's biggest drawback is that the traditional approach determines the benefits of pooling only by

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<sup>1</sup> See, e.g., ¶'s [0009]-[0012] of the published application, 2002/0178098.

measuring the direct interest gain and direct cost saving. In contrast to the prior art, the system and method of the present invention incorporates and analyzes the beneficial impact pooling can have in areas such as: reduced volatility of cash balance; cash forecasting; the ability to reduce the overall cash required to run the business; and the positive impact all of the above can have on earnings and the balance sheet.

The system and method of the present invention quantifies the working capital benefit of pooling using standard statistical techniques, and at the same time overcomes many of the difficulties inherent in the traditional pooling benefit measurements. The present system and method requires less data as the analysis relies on understanding the volatility of the cashflow in a given entity. These cashflow data tend to be reasonably constant over time so shorter data periods can be analyzed (i.e., less data). While still conducted using historical data, the method of the present invention is a much more accurate predictor of future periods. The method works even if the historic cash balances are unrepresentative of the steady state. A pooling benefit will be evident even if all entities have a long cash position all of the time. The pooling benefit determined by the present invention is similar whether the group has a do-nothing policy with regard to cash management, or has a very active cash management strategy which attempts to manage the individual entity's cash positions using intercompany loans.

One significant aspect of the present invention is its recognition of the fact that although a company's cash balance fluctuates on a daily basis, over time the distribution of the balance conforms to a Normal distribution. The pattern of a Normal distribution is followed both for the cash flow of individual companies without pooling, and the cash flow of a consolidated (pooled) cash account.

Given that the cash balances follow a Normal distribution, a company's cash flow is bounded by the mean of the distribution plus or minus the standard deviation multiplied by 2.3. This implies that the company must keep at least 2.3 times the standard deviation to ensure having enough cash to fund the company's operations. For  $n$  companies (e.g.,  $n$  subsidiaries of a larger corporation) the minimum aggregate cash required is therefore 2.3 times the sum of the respective standard deviations of the separate companies.

In its pooling analysis, the present invention determines that the average (mean) cash balance of the pooled account is the sum of the means of each of the individual accounts. Similarly, the standard deviation of the pooled account is the square root of the sum of the squares of the standard deviations of the individual accounts. Accordingly, the present invention determines the minimum cash level of the pooled account to be 2.3 times the square root of the sum of the squares of the standard deviations of the individual accounts.

In order to determine the benefit of pooling the present invention determines the difference between the minimum aggregate cash required by the separate companies and the minimum cash required in the pooled account. If pooling is to be beneficial, from a working capital perspective, the minimum cash required in the pooled account will be significantly less than the aggregate cash required by the separate companies.

## **B. Embodiments of the Claimed Invention**

### **1. Concise Explanation of Independent Claim 1**

A computer-implemented (*See, e.g.,* Fig. 4) method for determining a benefit of pooling separate cash accounts into a single pooled account, the method comprising: determining separate minimum cash balances required in the separate cash accounts (*See, e.g.,* ¶ [0023]); aggregating the separate minimum cash balances into an aggregated minimum cash balance (*See, e.g.,* ¶ [0025]); determining a pooled minimum cash balance required in the single pooled



account (*See, e.g.*, ¶ [0026]); and determining a difference between the aggregated minimum cash balance and the pooled minimum cash balance, wherein the difference is a benefit of pooling (*See, e.g.*, ¶ [0029]).

## **2. Concise Explanation of Independent Claim 9**

A system for determining a benefit of pooling separate cash accounts into a single pooled account, the system comprising: a communication network (*See, e.g.*, Fig. 4, Network 420); at least one user terminal (*See, e.g.*, Fig. 4, User Terminal 410) coupled to the communication network; and an information processor (*See, e.g.* Fig. 4, Information Processor 430) coupled to the communication network, wherein the information processor is operable to: determine separate minimum cash balances required in the separate cash accounts (*See, e.g.*, ¶ [0023]), aggregate the separate minimum cash balances into an aggregated minimum cash balance (*See, e.g.*, ¶ [0025]), determine a pooled minimum cash balance required in the single pooled account (*See, e.g.*, ¶ [0026]), and determine a difference between the aggregated minimum cash balance and the pooled minimum cash balance, wherein the difference is a benefit of pooling (*See, e.g.*, ¶ [0029]).

## **VI. Grounds Of Rejection To Be Reviewed On Appeal**

The following grounds of rejection are to be reviewed on appeal:

The rejection of claims 1, 4-9, and 12-16 under 35 U.S.C. § 103(a) as being unpatentable over Quail Creek in view of Official Notice.

The rejection of claims 2-3 and 10-11 under 35 U.S.C. § 103(a) as being unpatentable over Quail Creek in view of Official Notice and further in view of Tanaka.

None of the claims stand or fall together. The reasons why each claim is separately patentable are presented in the Arguments section below.

Claims 1, 4-9, and 12-16 are currently rejected under 35 U.S.C. § 103(a) as being unpatentable over Quail Creek Bank Rates Page (hereinafter “Quail Creek”) in view of Official Notice (as allegedly evidenced by the above-identified patent application’s background of the invention ¶ 0003-0006; hereinafter “Official Notice”).

Claims 2-3 and 10-11 are currently rejected under 35 U.S.C. § 103(a) as being unpatentable over Quail Creek in view of Official Notice and further in view of U.S. Patent No. 5,799,288 to Tanaka *et al.* (hereinafter “Tanaka”).

## **VII. Argument**

The rejections against the pending claims under consideration in the above-captioned patent application should be reversed for at least the reasons set forth below.

### **A. Brief Description of the Art Applied to the Claims**

#### **1. Quail Creek Bank Rates Page**

Quail Creek Bank Page comprises a typical bank rate disclosure sheet that sets forth a rate table comprising annual percentage yields for checking accounts, savings accounts, Certificates of Deposits (“CD’s”), and lending rate for vehicles, that are offered by the Quail Creek Bank.

#### **2. Official Notice**

Regarding claims 1 and 9, Official Notice is taken that steps of “aggregating the separate minimum balances into an aggregated minimum balance”; and “determining a difference between the aggregated minimum balance and the pooled minimum balance, wherein the difference is a benefit of pooling” are old and well-known, as allegedly evidenced by paragraphs [0003]-[0006] of the background of the invention of the pending application. *See, e.g.*, 2002/0178098, ¶s [0003]-[0006]. (“Official Notice 1”)

Regarding claims 4 and 12, Official Notice is taken that “pooling accounts into the single pooled account if the pooled balance is less than the aggregated balance” is old and well known. (“Official Notice 2”)

Regarding claims 5 and 13, Office Notice is taken that “receiving accounts to be pooled; receiving balance data for separate accounts; receiving identification of a current; and receiving interest spreads” is old and well known. (“Official Notice 3”)

Regarding claims 6 and 14, Office Notice is taken that “daily balance data is consecutive balance data” is old and well known. (“Official Notice 4”)

Regarding claims 7 and 15, Official Notice is taken that “wherein data is for a representative period” is old and well known. (“Official Notice 5”)

Regarding claims 8 and 16, Official Notice is taken that “wherein period is up to months” is old and well known. (“Official Notice 6”)

### **3. U.S. Patent No. 5,799,288 to Tanaka**

Tanaka discloses a remaining money management system which can predict and manage a demanded cash amount for an ATM. The remaining money management system includes one or more automatic cash transaction apparatus, and a remaining money management apparatus which manages remaining money amounts based on transaction data from the automatic cash transaction apparatus. The remaining money management apparatus includes a storage section for cumulatively storing transaction data from the automatic cash transaction apparatus, and a prediction section for calculating and predicting demanded cash amounts within a designated time for the automatic cash transaction apparatus based on transaction data in the past accumulated in the storage section. The remaining money amount management system can be applied to an apparatus for managing ATMs installed in monetary facilities such as banks. *See, Tanaka, Abstract.*

**B. Summary of the Argument**

The rejection of claims 1, 4-9 and 12-16 under 35 U.S.C. §103(a) as being unpatentable over Quail Creek Bank Page in view of Official Notice 1 is improper because the combination fails to make obvious each and every claim limitation as recited by Appellants. Further, the rejection is improper because the Office Action fails to demonstrate that the various taking of Official Notices 2-6 are old and well-known.

The rejection of claims 2-3 and 10-11 under 35 U.S.C. §103(a) as being unpatentable over Quail Creek Bank Page in view of Official Notice and further in view of Tanaka is improper because the combination fails to make obvious each and every claim limitation as recited by Appellants.

**C. Independent Claim 1 is Patentable Over the Combination of Quail Creek Bank Page and Official Notice 1**

Claim 1 is currently rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Quail Creek and Official Notice 1.

**1. The Quail Creek Bank Page is Deficient**

The Quail Creek Bank Page's limited disclosure is directed to a mere listing of various types of checking accounts, savings accounts, certificates of deposits (CDs), and vehicle lending rates that are available to consumers. *See* Quail Creek Bank Page at 1. Significantly, Quail Creek Bank Page makes no reference to "separate cash accounts," "a single pooled account," or a "pooled minimum cash balance," as required by the claim recitations. The primary reference, Quail Creek Bank Page, is applied by the Office Action as purportedly teaching "a computer-implemented method for determining a benefit of pooling separate cash accounts into a single pooled account," and in particular the limitations that recite: (1) "determining separate minimum

cash balances required in the separate cash accounts” and (2) “determining a pooled minimum cash balance required in the single pooled account.” See Office Action at 2.

Appellant respectfully submits that Quail Creek Bank Page merely illustrates a web site screen shot that presents interest rates and annual percentage yields (“APY”) for different types of accounts and financial products offered by the Quail Creek Bank (e.g., checking, savings, CDs, loans, etc.) based on minimum balances or term of loan. For example, as shown in the table corresponding to Checking Accounts on Page 1 of Quail Creek Bank Page, there are two types of accounts: an interest checking account and a Quail Classic Club account. Both accounts realize a higher interest rate and APY depending on the minimum balance maintained. While Appellant concedes that Quail Creek Bank Page discloses different types of accounts and associated minimum balances, there is no specific teaching or suggestion whatsoever of any feature or functionality that even remotely comprises the steps of “determining separate minimum cash balances required in the separate cash account pages,” or “determining a pooled minimum cash balance required in the single pooled account.”

In particular, it is not clear what if anything disclosed by Quail Creek Bank Page constitutes “a pooled minimum cash balance” or a “single pooled account.” The Office Action confusingly states on Page 10, ¶ 21 that Quail Creek Bank Page’s reference to “Interest Checking/Quail Classic Club: Minimum Balance \$1,000 to \$9,000.00/\$1,000 and over; Personal Savings/Business Savings: minimum balance \$100.00 and etc.” discloses the step of “determining a pooled minimum cash balance required in the single pooled account.” While the Office’s precise position and rationale is not entirely clear, it appears the Office considers the collection of accounts described in Quail Creek Bank Page as comprising, in the aggregate, the claimed “single pooled account” and the “pooled minimum balance.” Appellant submits such an

interpretation is without any legitimate basis or support. For one, there is absolutely nothing in Quail Creek Bank Page that suggests the collection of accounts and balances (or any of the accounts and balances disclosed) comprise a “single pooled account” or a “pooled minimum balance.” Further, there is nothing in Quail Creek Bank Page that suggests the different accounts could be pooled or otherwise combined. Quail Creek Bank Page merely sets forth a listing of different types of accounts (e.g., 2 different types of checking accounts, and 4 different types of savings accounts), but does not teach or suggest that those accounts, either alone or in the aggregate, comprise a “single pooled account” or contain a “pooled minimum cash balance,” as required by the claim recitations. Indeed, beyond the cryptic statement of Page 10, ¶21 the Office Action fails to explain how the disclosure of Quail Creek Bank Page meets the claim recitation of “determining a pooled minimum cash balance required in the single pooled account.” Thus, in summarily stating the various accounts of Quail Creek Bank Page comprise the claimed “pooled minimum cash balance” and the “single pooled account,” the Office is clearly engaging in improper hindsight reconstruction. For this reason alone, the Office Action has failed to meet its burden.

For the remaining claim limitations, Quail Creek Bank Page is admittedly deficient. More specifically, the Office Action admits that Quail Creek Bank Page fails to teach or suggest at least the steps of “aggregating the separate minimum cash balances into an aggregated minimum cash balance;” and “determining a difference between the aggregated minimum cash balance and the pooled minimum cash balance, wherein the difference is a benefit of pooling,” as recited in independent claim 1. *See* Office Action at 2.

**2. Official Notice Fails to Meet the Admitted Deficiencies of the Quail Creek**

The Examiner concedes, and Appellant agrees, that Quail Creek does not disclose the steps of: “aggregating the separate minimum cash balances into an aggregated minimum cash balance,” or “determining a difference between the aggregated minimum cash balance and the pooled minimum cash balance, wherein the difference is a benefit of pooling.” However, the Examiner takes Official Notice that the steps of “aggregating the separate minimum cash balances into an aggregated minimum cash balance,” and “determining a difference between the aggregated minimum cash balance and the pooled minimum cash balance, wherein the difference is a benefit of pooling” are old and well-known. The Examiner alleges that the Official Notice is evidenced by ¶ 0003-0006 of “Mark’s background of invention (U.S. Publication No. 2002/0178098),” which provide as follows:

[0003] Pooling is a financial method in which several different accounts of a customer are combined, “pooled” into a single account in order to obtain certain benefits. Some of these benefits include the ability to earn greater interest in the pooled account and decreased costs in maintaining the several accounts. For an example, a large corporation with several divisions or subsidiaries might consider pooling the cash accounts of the several divisions or subsidiaries to achieve interest and cost benefits.

[0004] Corporations will frequently hold multiple bank accounts with the same bank in the same currency. Often these accounts are held by individual subsidiaries or divisions of the corporation for the sole use of that business or legal entity. At any one time one or several of these accounts could be in deficit (overdraft) and pay debit interest to the bank, whilst at the same time other accounts could be in surplus (credit) and be earning credit interest. Given that credit interest is lower than debit interest, the corporation overall will forgo the ‘spread’ between the credit and debit interest on any offsetting long and short positions.

[0005] Historically, banks have been asked by their clients to calculate the various benefits of implementing a pooling structure for their organization. Typically, this process began by the client supplying historical data of the daily cash position for each of the individual entities it was intending to pool. For the analysis to be in any way representative, at least 3 months data, ideally more, was required. If the company was subject to seasonal variations, such as a manufacturer of ski equipment, account data representing anything less than a 12 month period would possibly be questionable. The financial data for each entity (e.g., division) within

the company would need to be collected over the same period. With this historical financial data in hand, the bank would then calculate the interest earnings and costs that each of these entities would have earned or incurred acting as stand-alone entities with their stand-alone cash positions over that historic period. The bank then calculated the interest earnings and costs that would be realized if the separate accounts had been pooled over this same period of time. The calculated interests and costs of the non-pooled accounts would then be compared to the interest earnings and costs which would have been earned or incurred had the accounts of these entities been pooled together over that historic period. The (presumably) increase in bank interest and decrease in associated costs would be said to be the pooling benefit.

[0006] There are a number of drawbacks with this traditional prior art approach for measuring the benefits of pooling. The traditional analysis is conducted on historic data which will inevitably contain one-time irregularities that will distort the data. The traditional analysis measures best case versus a do-nothing strategy. In practice, in the absence of any other liquidity structure, most treasurers would at least be taking some ad-hoc measures to share liquidity across the group using, for example, intercompany term loans. This oversight in the prior art techniques tends to diminish the validity of this analysis in the eyes of any but the most naive of treasurers. Finally, the prior art analysis will only show a pooling benefit if some of the entities have a cash deficit coincident with a surplus cash position in other entities.

See ¶s [0003]-[0006] (emphasis added).

In particular, the Office Action alleges that it would have been obvious to one of ordinary skill in the art to include these steps with the method for determining a benefit of pooling separate cash accounts into a single pooled account of Quail Creek to increase bank interest and decrease associated costs. Appellants traverse this rejection because the purported reference to the above application's "background of the invention" fails to support the Official Notice. Appellant is perplexed how the excerpts, ¶ 0003-0006, can be deemed to support the taking of Official Notice that the following steps are old and well-known: "aggregating the separate minimum cash balances into an aggregated minimum cash balance," and "determining a difference between the aggregated minimum cash balance and the pooled minimum cash balance, wherein the difference is a benefit of pooling." Rather, the excerpts to the background



of the invention merely discuss drawbacks with traditional pooling techniques which rely on the historical daily cash position for each of the individual entities or accounts to be pooled. The historical daily cash position of an entity or account is not the same as aggregating separate minimum cash balances. In fact, there is no teaching or suggestion in the background of the invention of using “minimum cash balances” for pooling purposes, much less for the specific steps of “aggregating the separate minimum cash balances into an aggregated minimum cash balance” or “determining a difference between the aggregated minimum cash balance and the pooled minimum cash balance.” For this reason, Appellant submits the Office’s taking of Official Notice 1 is improper and must be withdrawn. Accordingly, Appellants continue to traverse this rejection because there is no support in the record for the conclusion that the identified features are “old and well known.” In accordance with MPEP § 2144.03, the Examiner must cite a reference in support of his position.

In summary, Appellant submits that the proposed combination of Quail Creek with the Official Notice fails to teach or suggest each and every recitation of claim 1. For example, as stated above, Quail Creek merely discloses different interest rates and other particulars associated with different types of accounts, and does not teach or suggest any feature or functionality that can reasonably be considered to determine: (1) separate minimum cash balances required in the separate cash accounts, or (2) a pooled minimum cash balance required in the single pooled account, as required by independent claim 1. Accordingly, even if Quail Creek were combined with the Office Notice as proposed by the Examiner, the resulting combination would not teach or suggest each and every recitation of independent claim 1. For at least this reason, therefore, Appellant respectfully submits that independent claim 1 is allowable over the cited references.

As stated in MPEP § 2143.03, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). That is, “[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 165 USPQ 494, 496 (CCPA 1970). Accordingly, for at least the above reasons, the Appellants respectfully request the reversal of the rejection of independent claim 1 under 35 U.S.C. § 103(a).

**D. Independent Claim 9 is Patentable Over the Combination of Quail Creek and Official Notice 1.**

Claim 9 is currently rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Quail Creek Bank Page and Official Notice 1.

At the outset, Appellant submits that the Office has disregarded the system components recited in claim 9. Neither Quail Creek Bank Page nor Official Notice 1 teaches or suggests the system claimed in claim 9, namely, a communication network; at least one user terminal coupled to the communication network; and an information processor coupled to the communication network. The Office’s failure to specifically address these recitations requires that the rejection be withdrawn as failing the set forth a *prima facie* rejection.

Further, the Quail Creek Bank Page’s limited disclosure is directed to a mere listing of various types of checking accounts, savings accounts, certificates of deposits (CDs), and vehicle lending rates that are available to consumers. *See* Quail Creek Bank Page at 1. Significantly, Quail Creek Bank Page makes no reference to “separate cash accounts,” “a single pooled account,” or a “pooled minimum cash balance,” as required by the claim recitations. The primary reference, Quail Creek Bank Page, is applied by the Office Action as purportedly teaching “a computer-implemented method for determining a benefit of pooling separate cash

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collection of accounts described in Quail Creek Bank Page as comprising, in the aggregate, the claimed “single pooled account” and the “pooled minimum balance.” Appellant submits such an interpretation is without any legitimate basis or support. For one, there is absolutely nothing in Quail Creek Bank Page that suggests the collection of accounts and balances (or any of the accounts and balances disclosed) comprise a “single pooled account” or a “pooled minimum balance.” Further, there is nothing in Quail Creek Bank Page that suggests the different accounts could be pooled or otherwise combined. Quail Creek Bank Page merely sets forth a listing of different types of accounts (e.g., 2 different types of checking accounts, and 4 different types of savings accounts), but does not teach or suggest that those accounts, either alone or in the aggregate, comprise a “single pooled account” or contain a “pooled minimum cash balance,” as required by the claim recitations. Indeed, beyond the cryptic statement of Page 10, ¶21 the Office Action fails to explain how the disclosure of Quail Creek Bank Page meets the claim recitation of “determining a pooled minimum cash balance required in the single pooled account.” Thus, in summarily stating the various accounts of Quail Creek Bank Page comprise the claimed “pooled minimum cash balance” and the “single pooled account,” the Office is clearly engaging in improper hindsight reconstruction. For this reason alone, the Office Action has failed to meet its burden.

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**1. Official Notice Fails to Meet the Admitted Deficiencies of the Quail Creek**

The Examiner concedes, and Appellant agrees, that Quail Creek does not disclose the steps of: “aggregating the separate minimum cash balances into an aggregated minimum cash balance,” or “determining a difference between the aggregated minimum cash balance and the pooled minimum cash balance, wherein the difference is a benefit of pooling.” However, the Examiner takes Official Notice that the steps of “aggregating the separate minimum cash balances into an aggregated minimum cash balance,” and “determining a difference between the aggregated minimum cash balance and the pooled minimum cash balance, wherein the difference is a benefit of pooling” are old and well-known. The Examiner alleges that the Official Notice is evidenced by ¶ 0003-0006 of “Mark’s background of invention (U.S. Publication No. 2002/0178098),” which provide as follows:

[0003] Pooling is a financial method in which several different accounts of a customer are combined, “pooled” into a single account in order to obtain certain benefits. Some of these benefits include the ability to earn greater interest in the pooled account and decreased costs in maintaining the several accounts. For an example, a large corporation with several divisions or subsidiaries might consider pooling the cash accounts of the several divisions or subsidiaries to achieve interest and cost benefits.

[0004] Corporations will frequently hold multiple bank accounts with the same bank in the same currency. Often these accounts are held by individual subsidiaries or divisions of the corporation for the sole use of that business or legal entity. At any one time one or several of these accounts could be in deficit (overdraft) and pay debit interest to the bank, whilst at the same time other accounts could be in surplus (credit) and be earning credit interest. Given that credit interest is lower than debit interest, the corporation overall will forgo the ‘spread’ between the credit and debit interest on any offsetting long and short positions.

[0005] Historically, banks have been asked by their clients to calculate the various benefits of implementing a pooling structure for their organization. Typically, this process began by the client supplying historical data of the daily cash position for each of the individual entities it was intending to pool. For the analysis to be in any way representative, at least 3 months data, ideally more, was required. If the company was subject to seasonal variations, such as a manufacturer of ski

equipment, account data representing anything less than a 12 month period would possibly be questionable. The financial data for each entity (e.g., division) within the company would need to be collected over the same period. With this historical financial data in hand, the bank would then calculate the interest earnings and costs that each of these entities would have earned or incurred acting as stand-alone entities with their stand-alone cash positions over that historic period. The bank then calculated the interest earnings and costs that would be realized if the separate accounts had been pooled over this same period of time. The calculated interests and costs of the non-pooled accounts would then be compared to the interest earnings and costs which would have been earned or incurred had the accounts of these entities been pooled together over that historic period. The (presumably) increase in bank interest and decrease in associated costs would be said to be the pooling benefit.

[0006] There are a number of drawbacks with this traditional prior art approach for measuring the benefits of pooling. The traditional analysis is conducted on historic data which will inevitably contain one-time irregularities that will distort the data. The traditional analysis measures best case versus a do-nothing strategy. In practice, in the absence of any other liquidity structure, most treasurers would at least be taking some ad-hoc measures to share liquidity across the group using, for example, intercompany term loans. This oversight in the prior art techniques tends to diminish the validity of this analysis in the eyes of any but the most naive of treasurers. Finally, the prior art analysis will only show a pooling benefit if some of the entities have a cash deficit coincident with a surplus cash position in other entities.

See ¶s [0003]-[0006] (emphasis added).

In particular, the Office Action alleges that it would have been obvious to one of ordinary skill in the art to include these steps with the method for determining a benefit of pooling separate cash accounts into a single pooled account of Quail Creek to increase bank interest and decrease associated costs. Appellants traverse this rejection because the purported reference to the above application's "background of the invention" fails to support the Official Notice. Appellant is perplexed how the excerpts, ¶ 0003-0006, can be deemed to support the taking of Official Notice that the following steps are old and well-known: "aggregating the separate minimum cash balances into an aggregated minimum cash balance," and "determining a difference between the aggregated minimum cash balance and the pooled minimum cash

balance, wherein the difference is a benefit of pooling.” Rather, the excerpts to the background of the invention merely discuss drawbacks with traditional pooling techniques which rely on the historical daily cash position for each of the individual entities or accounts to be pooled. The historical daily cash position of an entity or account is not the same as aggregating separate minimum cash balances. In fact, there is no teaching or suggestion in the background of the invention of using “minimum cash balances” for pooling purposes, much less for the specific steps of “aggregating the separate minimum cash balances into an aggregated minimum cash balance” or “determining a difference between the aggregated minimum cash balance and the pooled minimum cash balance.” For this reason, Appellant submits the Office’s taking of Official Notice 1 is improper and must be withdrawn. Accordingly, Appellants continue to traverse this rejection because there is no support in the record for the conclusion that the identified features are “old and well known.” In accordance with MPEP § 2144.03, the Examiner must cite a reference in support of his position.

In summary, Appellant submits that the proposed combination of Quail Creek with the Official Notice fails to teach or suggest each and every recitation of claim 1. For example, as stated above, Quail Creek merely discloses different interest rates and other particulars associated with different types of accounts, and does not teach or suggest any feature or functionality that can reasonably be considered to determine: (1) separate minimum cash balances required in the separate cash accounts, or (2) a pooled minimum cash balance required in the single pooled account, as required by independent claim 1. Accordingly, even if Quail Creek were combined with the Office Notice as proposed by the Examiner, the resulting combination would not teach or suggest each and every recitation of independent claim 1. For at

least this reason, therefore, Appellant respectfully submits that independent claim 1 is allowable over the cited references.

**E. There is No Motivation to Combine Quail Creek Bank Page and Official Notice 1**

Under 35 U.S.C. § 103, the Patent Office bears the burden of establishing a prima facie case of obviousness. *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988). There are four separate factual inquiries to consider in making an obviousness determination: (1) the scope and content of the prior art; (2) the level of ordinary skill in the field of the invention; (3) the differences between the claimed invention and the prior art; and (4) the existence of any objective evidence, or “secondary considerations,” of non-obviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966); *see also KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007). An “expansive and flexible approach” should be applied when determining obviousness based on a combination of prior art references. *KSR*, 127 S. Ct. at 1739. However, a claimed invention combining multiple known elements is not rendered obvious simply because each element was known independently in the prior art. *Id.* at 1741. Rather, there must still be some “reason that would have prompted” a person of ordinary skill in the art to combine the elements in the specific way that he or she did. *Id.*; *In re Icon Health & Fitness, Inc.*, 496 F.3d 1374, 1380 (Fed. Cir. 2007). Also, modification of a prior art reference may be obvious only if there exists a reason that would have prompted a person of ordinary skill to make the change. *KSR*, 127 S. Ct. at 1740-41.

The Office Action’s statement of motivation is lacking. Based on these divergent disclosures, the Office Action summarily concludes that it would have been obvious to combine the disclosures of Quail Creek Bank Page article and Official Notice “to obtain better interest rate or annual percentage yield from pooled account.” *See* Office Action at 3. The Office Action has failed to provide a proper statement of motivation for combining the disparate



references. In particular, the Office never properly explains why one of ordinary skill in the art would be inclined to pool in the manner claimed the accounts that are disclosed by Quail Creek's Bank Page. Instead, the alleged statements of motivation are based on improper hindsight. Even if the combination of Quail Creek Bank Page and Official Notice 1 could be combined and modified as suggested by the Office Action, the resulting combination would nevertheless fail to show each and every limitation claimed by Appellants, as detailed above.

**F. The Rejection of Dependent Claims 2-8 and 10-16 is Improper**

As the remaining dependent claims encompass the limitations of independent claims, these claims should be allowed for at least the reasons stated above. Furthermore, the rejection of the dependent claims is also improper procedurally as addressed below. For at least these reasons, Appellants respectfully submit that the rejections of the pending claims are improper and request that they be withdrawn. Additionally, these claims are separately patentable over the combinations of references for at least the reasons stated below.

**1. Dependent Claim 2 is Separately Patentable**

Claim 2 is separately patentable because the combination of the Quail Creek Bank Page, Official Notice 1, and Takana fails to disclose "wherein the step of determining the separate minimum cash balances comprises: multiplying a standard deviation of a cash balance in each of the separate cash accounts by 2.3" as recited in claim 2. The Office's rejection of this claim is improper for the reasons set forth above with respect to claim 1. Additionally, the combination Quail Creek Bank Page, Official Notice 1 and Takana fails to disclose each and every element of claim 2. Furthermore, the Office has failed to provide a proper statement of motivation with respect to claim 2.

Claim 2 recites "wherein the step of determining the separate minimum cash balances comprises: multiplying a standard deviation of a cash balance in each of the separate cash

accounts by 2.3.” To address this claim limitation, the Office Action relies on Takana’s brief discussion of a “predicted error table of errors,” that has absolutely nothing to do with the recitation of claim 2:

(5) The prediction section 2B produces and holds, for each of the ATMs 1, a predicted error table of errors between actual result values of the demanded cash amount and predicted values of the demanded cash amount obtained by the prediction section 2B is stored, calculates a standard deviation of the errors of the predictive error table as a standard error, and calculates a value obtained by multiplying the calculated standard error by a safety coefficient as a safety cash amount to be added to the predicted value of the demanded cash amount obtained by the prediction section 2B.

*See* Takana, Col. 5, lines 57-67.

Clearly, the above discussion fails to meet “wherein the step of determining the separate minimum cash balances comprises: multiplying a standard deviation of a cash balance in each of the separate cash accounts by 2.3.” The Office Action’s rejection of this claim seems premised only on the fact that the referenced excerpt includes the phrase “standard deviation,” and thus is deficient and improper. Takana’s discussion of a “predicted error table of errors” has nothing to do with determining a minimum cash balance in the manner recited in claim 2. The Office Action has failed to address this deficiency.

**a. Non-Analogous Art**

Furthermore, Quail Creek Bank Page, Official Notice 1 and Tanaka are non-analogous art and one having ordinary skill in the art would not have combined the teachings of Quail Creek Bank Page and Official Notice 1 with Tanaka. A prior art reference is analogous if the reference is in the field of applicant’s endeavor or, if not, the reference is reasonably pertinent to the particular problem with which the inventor was concerned. *In re Oetiker*, 977 F.2d 1443, 1446 (Fed. Cir. 1992). When a modification to a primary reference involves a change in

configuration, both the primary and secondary references must be from analogous arts. *In re Glavas*, 230 F.2d 447 (CCPA 1956).

Tanaka relates to a remaining money management system which can predict and manage a demanded cash amount for an ATM. As such, Tanaka has nothing to do with the claimed systems and methods for determining a benefit of pooling separate cash accounts into a single pooled account. Based on the widely different scopes of the references, it is clear the Office Action is relying on improper hindsight to somehow forge together a combination. One having ordinary skill in the art would not look to non-analogous teachings of a system for predicting and managing a demanded cash amount for an ATM to address the deficiencies of the Quail Creek Bank Page which merely discloses a bank rate page or the taking of Official Notice 1 which merely describes drawbacks with traditional pooling techniques. The Office Action overly generalizes the incompatible references. Appellants maintain that the three references are non-analogous. One skilled in the art would not have been motivated to combine the references as suggested by the Office Action. Even if these disparate references could be combined as suggested by the Office Action, the resulting combination is nevertheless severely deficient for at least the reasons stated above.

**b. Three Reference Combination is Not Obvious**

Furthermore, the fact that three disparate references are needed in combination to address Appellants' claimed inventions further supports a finding of non-obviousness. The suggestion to combine becomes less plausible when the necessary elements can only be found in a large number of references. Donald S. Chisum, *Chisum on Patents* §5.04[I][e][6] (2002).

**2. Dependent Claim 3 is Separately Patentable**

Claim 3 is separately patentable because the combination of the Quail Creek Bank Page, Official Notice 1 and Takano fails to disclose "wherein the number of separate cash accounts is

n, and wherein the standard deviation of the cash balance in any one of the separate cash accounts is  $S(x)$ , the step of determining the separate minimum cash balances is given by  $2.3 \times \sum \{S(n)\}$ ,” as recited in claim 3. The Office’s rejection of this claim is improper for the reasons set forth above with respect to claim 1. Additionally, the combination of the Quail Creek Bank Page, Official Notice 1 and Takano fails to disclose each and every element of claim 3. Furthermore, the Office has failed to provide a proper statement of motivation with respect to claim 3.

Claim 3 is currently rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Quail Creek Bank Page, Official Notice 1, and in further view of Takana. Appellant respectfully submits, however, that the referenced excerpt from Takana merely discloses a “predicted error table of errors,” not the specific recitation “wherein the number of separate cash accounts is n, and wherein the standard deviation of the cash balance in any one of the separate cash accounts is  $S(x)$ , the step of determining the separate minimum cash balances is given by  $2.3 \times \sum \{S(n)\}$ ,” recited in claim 3.

**a. Non-Analogous Art**

Furthermore, Quail Creek Bank Page, Official Notice 1 and Tanaka are non-analogous art and one having ordinary skill in the art would not have combined the teachings of Quail Creek Bank Page and Official Notice 1 with Tanaka. A prior art reference is analogous if the reference is in the field of applicant’s endeavor or, if not, the reference is reasonably pertinent to the particular problem with which the inventor was concerned. *In re Oetiker*, 977 F.2d 1443, 1446 (Fed. Cir. 1992). When a modification to a primary reference involves a change in configuration, both the primary and secondary references must be from analogous arts. *In re Glavas*, 230 F.2d 447 (CCPA 1956).

Tanaka relates to a remaining money management system which can predict and manage a demanded cash amount for an ATM. As such, Tanaka has nothing to do with the claimed systems and methods for determining a benefit of pooling separate cash accounts into a single pooled account. Based on the widely different scopes of the references, it is clear the Office Action is relying on improper hindsight to somehow forge together a combination. One having ordinary skill in the art would not look to non-analogous teachings of a system for predicting and managing a demanded cash amount for an ATM to address the deficiencies of the Quail Creek Bank Page which merely discloses a bank rate page or the taking of Official Notice 1 which merely describes drawbacks with traditional pooling techniques. The Office Action overly generalizes the incompatible references. Appellants maintain that the three references are non-analogous. One skilled in the art would not have been motivated to combine the references as suggested by the Office Action. Even if these disparate references could be combined as suggested by the Office Action, the resulting combination is nevertheless severely deficient for at least the reasons stated above.

**b. Three Reference Combination is Not Obvious**

Furthermore, the fact that three disparate references are needed in combination to address Appellants' claimed inventions further supports a finding of non-obviousness. The suggestion to combine becomes less plausible when the necessary elements can only be found in a large number of references. Donald S. Chisum, *Chisum on Patents* §5.04[I][e][6] (2002).

**3. Dependent Claim 4 is Separately Patentable**

Claim 4 is currently rejected under 35 U.S.C. §103(a) as being obvious over Quail Creek Bank Page, Official Notice 1, and the Official Notice that "pooling accounts into the single pooled account if the pooled balance is less than the aggregated balance is old and well known" ("Official Notice 2").

Claim 4 is separately patentable because the combination of the Quail Creek Bank Page, Official Notice 1, and Official Notice 2 fails to disclose “pooling the separate cash accounts into the single pooled account if the pooled minimum cash balance is less than the aggregated minimum cash balance” as recited in claim 4. The Office’s rejection of this claim is improper for the reasons set forth above with respect to claim 1. Additionally, the combination of the Quail Creek Bank Page, Official Notice 1 and Official Notice 2 fails to disclose each and every element of claim 4. Furthermore, the Office has failed to provide a proper statement of motivation with respect to claim 4.

Further, Appellants traversed this use of Official Notice in the April 7, 2008 Response to January 8, 2008 Office Action, and respectfully requested a valid prior art reference that establishes this alleged understanding. *See* April 8, 2008 Response, Page 5, and in particular footnote 1. In response to Appellants’ proper traversal, the Examiner is required to supply a reference to support his position. However, the Examiner has failed to do so in the Office Action mailed July 30, 2008. *See* MPEP 2144.03. If applicant traverses the examiner’s assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. *See* 37 CFR 1.104 (c)(2). *See also In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).

#### **4. Dependent Claim 5 is Separately Patentable**

Claim 5 is currently rejected under 35 U.S.C. §103(a) as being obvious over Quail Creek Bank Page, Official Notice 1, and the Official Notice that “receiving accounts to be pooled; receiving balance data for separate accounts; receiving identification of a currency; and receiving interest spreads is old and well known” (“Official Notice 3”).

Claim 5 is separately patentable because the combination of the Quail Creek Bank Page, Official Notice 1 and Official Notice 3 fails to disclose the steps of “receiving the number of

separate cash accounts to be pooled; receiving daily balance data for each of the separate cash accounts; receiving an identification of a currency of the separate cash accounts; and receiving interest spreads for each of the separate cash accounts,” as recited in claim 5. The Office’s rejection of this claim is improper for the reasons set forth above with respect to claim 1. Additionally, the combination of the Quail Creek Bank Page, Official Notice 1, Official Notice 3 fails to disclose each and every element of claim 5. Furthermore, the Office has failed to provide a proper statement of motivation with respect to claim 5.

Further, Appellants traversed this use of Official Notice in the April 7, 2008 Response to January 8, 2008 Office Action, and respectfully requested a valid prior art reference that establishes this alleged understanding. *See* April 8, 2008 Response, Page 5, and in particular footnote 1. In response to Appellants’ proper traversal, the Examiner is required to supply a reference to support his position. However, the Examiner has failed to do so in the Office Action mailed July 30, 2008. *See* MPEP 2144.03. If applicant traverses the examiner’s assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. *See* 37 CFR 1.104 (c)(2). *See also In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).

#### **5. Dependent Claim 6 is Separately Patentable**

Claim 6 is currently rejected under 35 U.S.C. §103(a) as being obvious over Quail Creek Bank Page, Official Notice 1, and the Official Notice that “daily balance data is consecutive daily balance is old and well known” (“Official Notice 4”).

Claim 6 is separately patentable because the combination of the Quail Creek Bank Page, Official Notice 1, and Official Notice 4 fails to disclose “wherein the daily balance data is a time series of consecutive daily balance data” as recited in claim 6. The Office’s rejection of this claim is improper for the reasons set forth above with respect to claim 1. Additionally, the

combination of the Quail Creek Bank Page, Official Notice 1 and Official Notice 2 fails to disclose each and every element of claim 4. Furthermore, the Office has failed to provide a proper statement of motivation with respect to claim 4.

Further, Appellants traversed this use of Official Notice in the April 7, 2008 Response to January 8, 2008 Office Action, and respectfully requested a valid prior art reference that establishes this alleged understanding. *See* April 8, 2008 Response, Page 5, and in particular footnote 1. In response to Appellants' proper traversal, the Examiner is required to supply a reference to support his position. However, the Examiner has failed to do so in the Office Action mailed July 30, 2008. *See* MPEP 2144.03. If applicant traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. *See* 37 CFR 1.104 (c)(2). *See also In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).

#### **6. Dependent Claim 7 is Separately Patentable**

Claim 7 is currently rejected under 35 U.S.C. §103(a) as being obvious over Quail Creek Bank Page, Official Notice 1, and the Official Notice that "wherein the data is for a representative period of time is old and well known" ("Official Notice 5").

Claim 7 is separately patentable because the combination of the Quail Creek Bank Page, Official Notice 1, and Official Notice 5 fails to disclose "wherein the daily balance data is for a representative period," as recited in claim 7. The Office's rejection of this claim is improper for the reasons set forth above with respect to claim 1. Additionally, the combination of the Quail Creek Bank Page, Official Notice 1 and Official Notice 5 fails to disclose each and every element of claim 7. Furthermore, the Office has failed to provide a proper statement of motivation with respect to claim 7.



Further, Appellants traversed this use of Official Notice in the April 7, 2008 Response to January 8, 2008 Office Action, and respectfully requested a valid prior art reference that establishes this alleged understanding. *See* April 8, 2008 Response, Page 5, and in particular footnote 1. In response to Appellants' proper traversal, the Examiner is required to supply a reference to support his position. However, the Examiner has failed to do so in the Office Action mailed July 30, 2008. *See* MPEP 2144.03. If applicant traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. *See* 37 CFR 1.104 (c)(2). *See also In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).

#### **7. Dependent Claim 8 is Separately Patentable**

Claim 8 is currently rejected under 35 U.S.C. §103(a) as being obvious over Quail Creek Bank Page, Official Notice 1, and the Official Notice that "wherein period is up to months is old and well known" ("Official Notice 6").

Claim 8 is separately patentable because the combination of the Quail Creek Bank Page, Official Notice 1, and Official Notice 6 fails to disclose "wherein the representative period is up to three months," as recited in claim 8. The Office's rejection of this claim is improper for the reasons set forth above with respect to claim 1. Additionally, the combination of the Quail Creek Bank Page, Official Notice 1 and Official Notice 6 fails to disclose each and every element of claim 8. Furthermore, the Office has failed to provide a proper statement of motivation with respect to claim 8.

Further, Appellants traversed this use of Official Notice in the April 7, 2008 Response to January 8, 2008 Office Action, and respectfully requested a valid prior art reference that establishes this alleged understanding. *See* April 8, 2008 Response, Page 5, and in particular footnote 1. In response to Appellants' proper traversal, the Examiner is required to supply a

reference to support his position. However, the Examiner has failed to do so in the Office Action mailed July 30, 2008. *See* MPEP 2144.03. If applicant traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. *See* 37 CFR 1.104 (c)(2). *See also In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).

#### **8. Dependent Claim 10 is Separately Patentable**

Claim 10 is separately patentable because the combination of the Quail Creek Bank Page, Official Notice 1, and Takana fails to disclose "wherein the information processor is further operable to determine the separate minimum cash balances by multiplying a standard deviation of a cash balance in each of the separate cash accounts by 2.3," as recited in claim 10. The Office's rejection of this claim is improper for the reasons set forth above with respect to claim 9. Additionally, the combination Quail Creek Bank Page, Office Notice 1 and Takana fails to disclose each and every element of claim 10. Furthermore, the Office has failed to provide a proper statement of motivation with respect to claim 10.

Claim 10 recites "wherein the information processor is further operable to determine the separate minimum cash balances by multiplying a standard deviation of a cash balance in each of the separate cash accounts by 2.3." To address this claim limitation, the Office Action relies on Takana's brief discussion of a "predicted error table of errors," that has absolutely nothing to do with the recitation of claim 10:

(5) The prediction section 2B produces and holds, for each of the ATMs 1, a predicted error table of errors between actual result values of the demanded cash amount and predicted values of the demanded cash amount obtained by the prediction section 2B is stored, calculates a standard deviation of the errors of the predictive error table as a standard error, and calculates a value obtained by multiplying the calculated standard error by a safety coefficient as a safety cash amount to be added to the predicted value of the demanded cash amount obtained by the prediction section 2B.

See Takana, Col. 5, lines 57-67.

Clearly, the above discussion fails to meet “wherein the information processor is further operable to determine the separate minimum cash balances by multiplying a standard deviation of a cash balance in each of the separate cash accounts by 2.3.” The Office Action’s rejection of this claim seems premised only on the fact that the referenced excerpt includes the phrase “standard deviation,” and thus is deficient and improper. Takana’s discussion of a “predicted error table of errors” has nothing to do with determining a minimum cash balance in the manner recited in claim 10. The Office Action has failed to address this deficiency.

**a. Non-Analogous Art**

Furthermore, Quail Creek Bank Page, Official Notice 1 and Tanaka are non-analogous art and one having ordinary skill in the art would not have combined the teachings of Quail Creek Bank Page and Official Notice 1 with Tanaka. A prior art reference is analogous if the reference is in the field of applicant’s endeavor or, if not, the reference is reasonably pertinent to the particular problem with which the inventor was concerned. *In re Oetiker*, 977 F.2d 1443, 1446 (Fed. Cir. 1992). When a modification to a primary reference involves a change in configuration, both the primary and secondary references must be from analogous arts. *In re Glavas*, 230 F.2d 447 (CCPA 1956).

Tanaka relates to a remaining money management system which can predict and manage a demanded cash amount for an ATM. As such, Tanaka has nothing to do with the claimed systems and methods for determining a benefit of pooling separate cash accounts into a single pooled account. Based on the widely different scopes of the references, it is clear the Office Action is relying on improper hindsight to somehow forge together a combination. One having ordinary skill in the art would not look to non-analogous teachings of a system for predicting and

managing a demanded cash amount for an ATM to address the deficiencies of the Quail Creek Bank Page which merely discloses a bank rate page or the taking of Official Notice 1 which merely describes drawbacks with traditional pooling techniques. The Office Action overly generalizes the incompatible references. Appellants maintain that the three references are non-analogous. One skilled in the art would not have been motivated to combine the references as suggested by the Office Action. Even if these disparate references could be combined as suggested by the Office Action, the resulting combination is nevertheless severely deficient for at least the reasons stated above.

**b. Three Reference Combination is Not Obvious**

Furthermore, the fact that three disparate references are needed in combination to address Appellants' claimed inventions further supports a finding of non-obviousness. The suggestion to combine becomes less plausible when the necessary elements can only be found in a large number of references. Donald S. Chisum, Chisum on Patents §5.04[I][e][6] (2002).

**9. Dependent Claim 11 is Separately Patentable**

Claim 11 is separately patentable because the combination of the Quail Creek Bank Page, Official Notice 1 and Takano fails to disclose "wherein the number of separate cash accounts is  $n$ , and wherein the standard deviation of the cash balance in any one of the separate cash accounts is  $S(x)$ , wherein the information processor is further operable to determining the separate minimum cash balances by determining  $2.3 \times \sum\{S(n)\}$ ," as recited in claim 11. The Office's rejection of this claim is improper for the reasons set forth above with respect to claim 9. Additionally, the combination of the Quail Creek Bank Page, Official Notice 1 and Takano fails to disclose each and every element of claim 11. Furthermore, the Office has failed to provide a proper statement of motivation with respect to claim 11.

Claim 11 is currently rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable

over Quail Creek Bank Page, Official Notice 1, and in further view of Takana. Appellant respectfully submits, however, that the referenced excerpt from Takana merely discloses a “predicted error table of errors,” not the specific recitation “wherein the number of separate cash accounts is  $n$ , and wherein the standard deviation of the cash balance in any one of the separate cash accounts is  $S(x)$ , the step of determining the separate minimum cash balances is given by  $2.3 \times \sum \{S(n)\}$ ,” recited in claim 11.

**a. Non-Analogous Art**

Furthermore, Quail Creek Bank Page, Official Notice 1 and Tanaka are non-analogous art and one having ordinary skill in the art would not have combined the teachings of Quail Creek Bank Page and Official Notice 1 with Tanaka. A prior art reference is analogous if the reference is in the field of applicant’s endeavor or, if not, the reference is reasonably pertinent to the particular problem with which the inventor was concerned. *In re Oetiker*, 977 F.2d 1443, 1446 (Fed. Cir. 1992). When a modification to a primary reference involves a change in configuration, both the primary and secondary references must be from analogous arts. *In re Glavas*, 230 F.2d 447 (CCPA 1956).

Tanaka relates to a remaining money management system which can predict and manage a demanded cash amount for an ATM. As such, Tanaka has nothing to do with the claimed systems and methods for determining a benefit of pooling separate cash accounts into a single pooled account. Based on the widely different scopes of the references, it is clear the Office Action is relying on improper hindsight to somehow forge together a combination. One having ordinary skill in the art would not look to non-analogous teachings of a system for predicting and managing a demanded cash amount for an ATM to address the deficiencies of the Quail Creek Bank Page which merely discloses a bank rate page or the taking of Official Notice 1 which

merely describes drawbacks with traditional pooling techniques. The Office Action overly generalizes the incompatible references. Appellants maintain that the three references are non-analogous. One skilled in the art would not have been motivated to combine the references as suggested by the Office Action. Even if these disparate references could be combined as suggested by the Office Action, the resulting combination is nevertheless severely deficient for at least the reasons stated above.

**b. Three Reference Combination is Not Obvious**

Furthermore, the fact that three disparate references are needed in combination to address Appellants' claimed inventions further supports a finding of non-obviousness. The suggestion to combine becomes less plausible when the necessary elements can only be found in a large number of references. Donald S. Chisum, Chisum on Patents §5.04[I][e][6] (2002).

**10. Dependent Claim 12 is Separately Patentable**

Claim 12 is currently rejected under 35 U.S.C. §103(a) as being obvious over Quail Creek Bank Page, Official Notice 1, and the Official Notice that "pooling accounts into the single pooled account if the pooled balance is less than the aggregated balance is old and well known" ("Official Notice 2").

Claim 12 is separately patentable because the combination of the Quail Creek Bank Page, Official Notice 1, and Official Notice 2 fails to disclose "wherein the information processor is further operable to: issue an instruction to pool the separate cash accounts into the single pooled account if the pooled minimum cash balance is less than the aggregated minimum cash balance" as recited in claim 12. The Office's rejection of this claim is improper for the reasons set forth above with respect to claim 9. Additionally, the combination of the Quail Creek Bank Page, Official Notice 1 and Official Notice 2 fails to disclose each and every element of claim 12.

Furthermore, the Office has failed to provide a proper statement of motivation with respect to claim 12.

Further, Appellants traversed this use of Official Notice in the April 7, 2008 Response to January 8, 2008 Office Action, and respectfully requested a valid prior art reference that establishes this alleged understanding. *See* April 8, 2008 Response, Page 5, and in particular footnote 1. In response to Appellants' proper traversal, the Examiner is required to supply a reference to support his position. However, the Examiner has failed to do so in the Office Action mailed July 30, 2008. *See* MPEP 2144.03. If applicant traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. *See* 37 CFR 1.104 (c)(2). *See also In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).

#### **11. Dependent Claim 13 is Separately Patentable**

Claim 13 is currently rejected under 35 U.S.C. §103(a) as being obvious over Quail Creek Bank Page, Official Notice 1, and the Official Notice that "receiving accounts to be pooled; receiving balance data for separate accounts; receiving identification of a currency; and receiving interest spreads is old and well known" ("Official Notice 3").

Claim 13 is separately patentable because the combination of the Quail Creek Bank Page, Official Notice 1 and Official Notice 3 fails to disclose an "input interface operable to: receive the number of separate cash accounts to be pooled, receive daily balance data for each of the separate cash accounts, receive an identification of a currency of the separate cash accounts, and receive interest spreads for each of the separate cash accounts," as recited in claim 13. The Office's rejection of this claim is improper for the reasons set forth above with respect to claim 1. Additionally, the combination of the Quail Creek Bank Page, Official Notice 1, Official

Notice 3 fails to disclose each and every element of claim 13. Furthermore, the Office has failed to provide a proper statement of motivation with respect to claim 13.

Further, Appellants traversed this use of Official Notice in the April 7, 2008 Response to January 8, 2008 Office Action, and respectfully requested a valid prior art reference that establishes this alleged understanding. *See* April 8, 2008 Response, Page 5, and in particular footnote 1. In response to Appellants' proper traversal, the Examiner is required to supply a reference to support his position. However, the Examiner has failed to do so in the Office Action mailed July 30, 2008. *See* MPEP 2144.03. If applicant traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. *See* 37 CFR 1.104 (c)(2). *See also In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).

#### **12. Dependent Claim 14 is Separately Patentable**

Claim 14 is currently rejected under 35 U.S.C. §103(a) as being obvious over Quail Creek Bank Page, Official Notice 1, and the Official Notice that "daily balance data is consecutive daily balance is old and well known" ("Official Notice 4").

Claim 14 is separately patentable because the combination of the Quail Creek Bank Page, Official Notice 1, and Official Notice 4 fails to disclose "wherein the daily balance data is a time series of consecutive daily balance data," as recited in claim 14. The Office's rejection of this claim is improper for the reasons set forth above with respect to claim 9. Additionally, the combination of the Quail Creek Bank Page, Official Notice 1 and Official Notice 2 fails to disclose each and every element of claim 16. Furthermore, the Office has failed to provide a proper statement of motivation with respect to claim 16.

Further, Appellants traversed this use of Official Notice in the April 7, 2008 Response to January 8, 2008 Office Action, and respectfully requested a valid prior art reference that



establishes this alleged understanding. *See* April 8, 2008 Response, Page 5, and in particular footnote 1. In response to Appellants' proper traversal, the Examiner is required to supply a reference to support his position. However, the Examiner has failed to do so in the Office Action mailed July 30, 2008. *See* MPEP 2144.03. If applicant traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. *See* 37 CFR 1.104 (c)(2). *See also In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).

### **13. Dependent Claim 15 is Separately Patentable**

Claim 15 is currently rejected under 35 U.S.C. §103(a) as being obvious over Quail Creek Bank Page, Official Notice 1, and the Official Notice that "wherein the data is for a representative period of time is old and well known" ("Official Notice 5").

Claim 15 is separately patentable because the combination of the Quail Creek Bank Page, Official Notice 1, and Official Notice 5 fails to disclose "wherein the daily balance data is for a representative period," as recited in claim 15. The Office's rejection of this claim is improper for the reasons set forth above with respect to claim 9. Additionally, the combination of the Quail Creek Bank Page, Official Notice 1 and Official Notice 5 fails to disclose each and every element of claim 15. Furthermore, the Office has failed to provide a proper statement of motivation with respect to claim 15.

Further, Appellants traversed this use of Official Notice in the April 7, 2008 Response to January 8, 2008 Office Action, and respectfully requested a valid prior art reference that establishes this alleged understanding. *See* April 8, 2008 Response, Page 5, and in particular footnote 1. In response to Appellants' proper traversal, the Examiner is required to supply a reference to support his position. However, the Examiner has failed to do so in the Office Action mailed July 30, 2008. *See* MPEP 2144.03. If applicant traverses the examiner's assertion of

official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. *See* 37 CFR 1.104 (c)(2). *See also In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).

#### **14. Dependent Claim 16 is Separately Patentable**

Claim 16 is currently rejected under 35 U.S.C. §103(a) as being obvious over Quail Creek Bank Page, Official Notice 1, and the Official Notice that “wherein period is up to months is old and well known” (“Official Notice 6”).

Claim 16 is separately patentable because the combination of the Quail Creek Bank Page, Official Notice 1, and Official Notice 6 fails to disclose “wherein the representative period is up to three months,” as recited in claim 16. The Office’s rejection of this claim is improper for the reasons set forth above with respect to claim 9. Additionally, the combination of the Quail Creek Bank Page, Official Notice 1 and Official Notice 6 fails to disclose each and every element of claim 16. Furthermore, the Office has failed to provide a proper statement of motivation with respect to claim 16.

Further, Appellants traversed this use of Official Notice in the April 7, 2008 Response to January 8, 2008 Office Action, and respectfully requested a valid prior art reference that establishes this alleged understanding. *See* April 8, 2008 Response, Page 5, and in particular footnote 1. In response to Appellants’ proper traversal, the Examiner is required to supply a reference to support his position. However, the Examiner has failed to do so in the Office Action mailed July 30, 2008. *See* MPEP 2144.03. If applicant traverses the examiner’s assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. *See* 37 CFR 1.104 (c)(2). *See also In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).

**VIII. Conclusion**

Because the cited reference fails to disclose or render obvious all features set forth in the pending claims, Appellants submit that the pending claims are allowable over the cited reference. Accordingly, Appellants respectfully request that the Board reverse the prior art rejections set forth in the Action. Authorization is hereby granted to charge or credit the undersigned's Deposit Account No. 50-0206 for any fees or overpayments related to the entry of this Appeal Brief.

Respectfully submitted,



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**IX. Claims Appendix**

Claim 1. (Previously Presented) A computer-implemented method for determining a benefit of pooling separate cash accounts into a single pooled account, the method comprising: determining separate minimum cash balances required in the separate cash accounts; aggregating the separate minimum cash balances into an aggregated minimum cash balance;

determining a pooled minimum cash balance required in the single pooled account; and determining a difference between the aggregated minimum cash balance and the pooled minimum cash balance, wherein the difference is a benefit of pooling.

Claim 2. (Original) The method as recited in claim 1, wherein the step of determining the separate minimum cash balances comprises: multiplying a standard deviation of a cash balance in each of the separate cash accounts by 2.3.

Claim 3. (Original) The method as recited in claim 2, wherein the number of separate cash accounts is  $n$ , and wherein the standard deviation of the cash balance in any one of the separate cash accounts is  $S(x)$ , the step of determining the separate minimum cash balances is given by  $2.3 \times \sum \{S(n)\}$ .

Claim 4. (Original) The method as recited in claim 1, further comprising: pooling the separate cash accounts into the single pooled account if the pooled minimum cash balance is less than the aggregated minimum cash balance.

Claim 5. (Original) The method as recited in claim 1, further comprising: receiving the number of separate cash accounts to be pooled; receiving daily balance data for each of the separate cash accounts; receiving an identification of a currency of the separate cash accounts; and

receiving interest spreads for each of the separate cash accounts.

Claim 6. (Original) The method as recited in claim 5, wherein the daily balance data is a time series of consecutive daily balance data.

Claim 7. (Original) The method as recited in claim 6, wherein the daily balance data is for a representative period.

Claim 8. (Original) The method as recited in claim 7, wherein the representative period is up to three months.

Claim 9. (Original) A system for determining a benefit of pooling separate cash accounts into a single pooled account, the system comprising:

a communication network;

at least one user terminal coupled to the communication network; and

an information processor coupled to the communication network, wherein the information processor is operable to:

determine separate minimum cash balances required in the separate cash accounts, aggregate the separate minimum cash balances into an aggregated minimum cash balance, determine a pooled minimum cash balance required in the single pooled account, and determine a difference between the aggregated minimum cash balance and the pooled minimum cash balance, wherein the difference is a benefit of pooling.

Claim 10. (Original) The system as recited in claim 9, wherein the information processor is further operable to determine the separate minimum cash balances by multiplying a standard deviation of a cash balance in each of the separate cash accounts by 2.3.

Claim 11. (Original) The system as recited in claim 10, wherein the number of separate cash accounts is  $n$ , and wherein the standard deviation of the cash balance in any one of

the separate cash accounts is  $S(x)$ , wherein the information processor is further operable to determining the separate minimum cash balances by determining  $2.3 \times \sum \{S(n)\}$ .

Claim 12. (Original) The system as recited in claim 9, wherein the information processor is further operable to:

issue an instruction to pool the separate cash accounts into the single pooled account if the pooled minimum cash balance is less than the aggregated minimum cash balance.

Claim 13. (Original) The system as recited in claim 9, further comprising: an input interface, the input interface operable to:

receive the number of separate cash accounts to be pooled, receive daily balance data for each of the separate cash accounts, receive an identification of a currency of the separate cash accounts, and receive interest spreads for each of the separate cash accounts.

Claim 14. (Original) The system as recited in claim 13, wherein the daily balance data is a time series of consecutive daily balance data.

Claim 15. (Original) The system as recited in claim 14, wherein the daily balance data is for a representative period.

Claim 16. (Original) The system as recited in claim 15, wherein the representative period is up to three months.

**X. Evidence Appendix**

None.

**XI. Related Proceedings Appendix**

None.